

UUU	UUU	EEEEEEEEEEEEEEEE	TTTTTTTTTTTTTTTT	PPPPPPPPPPPPPP	
UUU	UUU	EEEEEEEEEEEEEEEE	TTTTTTTTTTTTTTTT	PPPPPPPPPPPPPP	
UUU	UUU	EEEEEEEEEEEEEEEE	TTTTTTTTTTTTTTTT	PPPPPPPPPPPPPP	
UUU	UUU	EEE	TTT	PPP	PPP
UUU	UUU	EEE	TTT	PPP	PPP
UUU	UUU	EEE	TTT	PPP	PPP
UUU	UUU	EEE	TTT	PPP	PPP
UUU	UUU	EEE	TTT	PPP	PPP
UUU	UUU	EEE	TTT	PPP	PPP
UUU	UUU	EEE	TTT	PPP	PPP
UUU	UUU	EEEEEEEEEEEEEEEE	TTT	PPPPPPPPPPPPPP	
UUU	UUU	EEEEEEEEEEEEEEEE	TTT	PPPPPPPPPPPPPP	
UUU	UUU	EEEEEEEEEEEEEEEE	TTT	PPPPPPPPPPPPPP	
UUU	UUU	EEE	TTT	PPP	
UUU	UUU	EEE	TTT	PPP	
UUU	UUU	EEE	TTT	PPP	
UUU	UUU	EEE	TTT	PPP	
UUU	UUU	EEE	TTT	PPP	
UUU	UUU	EEE	TTT	PPP	
UUU	UUU	EEE	TTT	PPP	
UUUUUUUUUUUUUUUU	UUUUUUUUUUUUUUUU	EEEEEEEEEEEEEEEE	TTT	PPP	
UUUUUUUUUUUUUUUU	UUUUUUUUUUUUUUUU	EEEEEEEEEEEEEEEE	TTT	PPP	
UUUUUUUUUUUUUUUU	UUUUUUUUUUUUUUUU	EEEEEEEEEEEEEEEE	TTT	PPP	

SA
VO

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LL               IIIIII               SSSSSSSS
LL               IIIIII               SSSSSSSS
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LL               II                   SS
LL               II                   SS
LLLLLLLLLLLLLL  IIIIII               SSSSSSSS
LLLLLLLLLLLLLL  IIIIII               SSSSSSSS

```


(1)	53	DECLARATIONS
(1)	75	OWN STORAGE
(1)	113	R/W PSECT
(1)	207	SATSSF17
(2)	262	INPUT TESTS
(2)	356	OUTPUT TESTS
(3)	451	QIO TESTS
(3)	573	QIOW TESTS
(3)	697	REG_SAVE
(3)	718	REG_CHECK
(3)	761	PRINT FAIL
(3)	797	MOD MSG_PRINT
(3)	810	CHMRTN

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```
0000 1 .TITLE SATSSF17 - SATS SYSTEM SERVICE TESTS (FAILING S.C.)
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 *****
0000 6 *
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0000 24 *
0000 25 *
0000 26 *****
0000 27
0000 28
0000 29 ++
0000 30 FACILITY: SATS SYSTEM SERVICE TESTS
0000 31
0000 32 ABSTRACT: The SATSSF17 module tests the execution of the following
0000 33 VMS system services, invoked in such a way as to expect failing
0000 34 status codes:
0000 35 $INPUT
0000 36 $OUTPUT
0000 37 $QIO
0000 38 $QIOW
0000 39
0000 40
0000 41 ENVIRONMENT: User mode image; needs CMKRNL privilege,
0000 42 dynamically acquires other privileges, as needed.
0000 43
0000 44 AUTHOR: Larry D. Jones, CREATION DATE: OCTOBER, 1979
0000 45
0000 46 MODIFIED BY:
0000 47
0000 48 V03-001 LDJ0001 Larry D. Jones, 17-Sep-1980
0000 49 Modified to conform to new build command procedures.
0000 50 **
0000 51 --
```



```

0000 53 .SBTTL DECLARATIONS
0000 54 :
0000 55 : MACRO LIBRARY CALLS
0000 56 :
0000 57 $PRVDEF ; privilege definitions
0000 58 $UETPDEF ; UETP message definitions
0000 59 $SHR MESSAGES UETP,116,<<TEXT,INFO>> ; UETPS_TEXT definition
0000 60 $PHDDEF ; process header definitions
0000 61 $PCBDEF ; PCB definitions
0000 62 $SSDEF ; SS definitions
0000 63 $STSDEF ; STS definitions
0000 64 :
0000 65 : Equated symbols
0000 66 :
00000000 0000 67 WARNING = 0 ; warning severity value for msgs
00000001 0000 68 SUCCESS = 1 ; success
00000002 0000 69 ERROR = 2 ; error
00000003 0000 70 INFO = 3 ; information
00000004 0000 71 SEVERE = 4 ; fatal
00000001 0000 72 PRVHND_SXV40 = 1 ; page 0 address for SETEXV
0000 73

```



```
0000 75 .SBTTL OWN STORAGE
0000 76 .PSECT RODATA,RD,NOWRT,NOEXE, LONG
0000 77 ;
0000 78 TEST_MOD_NAME:
0000 79 .ASCIC /SATSSF17/ ; needed for SATSMS message
37 31 46 53 53 54 41 53 00' 0009 80 TEST_MOD_NAME D:
08 0000 81 .ASCID /SATSSF17/ ; module name
46 53 53 54 41 53 00000011'010E0000' 0009
37 31 0017
0019 82 TEST_MOD_BEGIN:
6E 75 67 65 62 00' 0019 83 .ASCIC /begun/
05 0019
001F 84 TEST_MOD_SUCC:
6C 75 66 73 73 65 63 63 75 73 00' 001F 85 .ASCIC /successful/
0A 001F
002A 86 TEST_MOD_FAIL:
64 65 6C 69 61 66 00' 002A 87 .ASCIC /failed/
06 002A
0031 88 INPUT:
54 55 50 4E 49 00' 0031 89 .ASCIC /INPUT/
05 0031
0037 90 OUTPUT:
54 55 50 54 55 4F 00' 0037 91 .ASCIC /OUTPUT/
06 0037
003E 92 QIO:
4F 49 51 00' 003E 93 .ASCIC /QIO/
03 003E
0042 94 QIOW:
57 4F 49 51 00' 0042 95 .ASCIC /QIOW/
04 0042
0047 96 INADR:
00000000'00000000' 0047 97 .LONG NOACCESS,NOACCESS ; page address of noaccess psect
004F 98 PROT:
00000000' 004F 99 .LONG PRT$C_NA ; protection code for no access psect
0053 100 PRVHND_SXV41: ; read only access location
0053 101 CS1:
0053 102 .ASCID \Test !AC service name !AC step !UL failed.\
6E 20 65 63 69 76 72 65 73 20 43 41 0061
70 65 74 73 20 43 41 21 20 65 6D 61 006D
2E 64 65 6C 69 61 66 20 4C 55 21 20 0079
0085 103 CS2:
74 63 65 70 78 45 0000008D'010E0000' 0085 104 .ASCID \Expected !AS = !XL received !AS = !XL\
4C 58 21 20 3D 20 53 41 21 20 64 65 0093
41 21 20 64 65 76 69 65 63 65 72 20 009F
4C 58 21 20 3D 20 53 00AB
00B2 105 CS3:
74 63 65 70 78 45 0000008A'010E0000' 00B2 106 .ASCID \Expected !AS!UB = !XL received !AS!UB = !XL\
20 3D 20 42 55 21 53 41 21 20 64 65 00C0
64 65 76 69 65 63 65 72 20 4C 58 21 00CC
58 21 20 3D 20 42 55 21 53 41 21 20 00D8
4C 00E4
00E5 107 EXP:
73 75 74 61 74 73 000000ED'010E0000' 00E5 108 .ASCID \status\
00F3 109 MBNAM:
54 54 000000FB'010E0000' 00F3 110 .ASCID \TT\
```



```
00FD 112 ;
00FD 113 ;
00000000 114 .SBTTL R/W PSECT
          115 .PSECT RWDATA,RD,WRT,NOEXE,LONG
0000 116 ;
0000 117 PID: ; PID for this process
00000000 0000 118 CURRENT_TC: ; ptr to current test case
00000000 0004 119 .LONG 0
          120 .ALIGN LONG
00000044 0008 121 REG_SAVE_AREA:
          122 .BLKL 15 ; register save area
007480D9 0044 123 MOD_MSG_CODE:
          124 .LONG UETP$_SATSMS ; test module message code for putmsg
00000000' 0048 125 TMN_ADDR:
          126 .ADDRESS TEST_MOD_NAME
00000019' 004C 127 TMD_ADDR:
          128 .ADDRESS TEST_MOD_BEGIN
          0050 129 PRVPRT:
          0050 130 .BYTE 0 ; protection return byte for SETPRT
00000000 00000000 0051 131 PRIVMASK: ; priv. mask
          0051 132 .QUAD 0
          0059 133 CHM_CONT:
          0059 134 .LONG 0 ; change mode continue address
00000065 005D 135 RETADR:
          005D 136 .BLKL 2 ; returned address's from SETPRT
          0065 137 INP:
          0065 138 $INPUT 0,0,0 ; INPUT parameter list
          0088 139 OUT:
          0088 140 $OUTPUT 0,0,0 ; OUTPUT parameter list
          00AD 141 QIOP:
          00AD 142 $QIO -1,0,IO$_READVBLK,0,0,0,MBNAM,0 ; QIO parameter list
          00E1 143 QIOWP:
          00E1 144 $QIOW -1,0,IO$_READVBLK,0,0,0,MBNAM,0 ; QIOW parameter list
          0115 145
          0115 146 REG:
          0115 147 .ASCID \register R\
74 73 69 67 65 72 0000011D'010E0000' 0123
52 20 72 65 0127
00000000 0127 148 REGNUM: ; register number
          0127 149 .LONG 0
          012B 150 MSGL: ; buffer desc.
          012B 151 .LONG 80
00000050 012F 152 .ADDRESS BUF
00000133' 0133 153 BUF:
          0133 154 .BLKB 80
          0183 155 MESSAGEL:
          0183 156 .LONG 0 ; message desc.
00000000 0187 157 .ADDRESS BUF
00000133' 018B 158 SERV_NAME:
          018B 159 .LONG 0 ; service name pointer
          018F 160 MBCHAN:
          018F 161 .WORD 0 ; channel location
```



```
00000000 163 .PSECT SATS ACCVIO_1, RD, WRT, NOEXE, PAGE
00000200 0000 164 EMPTY: .BLKB 512 ; reserve a page of space
          0200 165 :
          0200 166 : +
          0200 167 : *****
          0200 168 : *
          0200 169 : * THE ORDER OF STATEMENTS IN THIS PSECT IS CRITICAL. *
          0200 170 : * DO NOT RE-ARRANGE THE VARIABLES. CONSULT SATS *
          0200 171 : * FUNCTIONAL SPECIFICATION FOR A DESCRIPTION OF THE USE *
          0200 172 : * OF THE EMPTY PSECT (AND ITS COMPANION PSECT, NOACCESS). *
          0200 173 : *
          0200 174 : *****
          0200 175 : -
          0200 176 :
000001FF 0200 177 PRVHND_SXV42 = . - 1 ; prvhd arg for SETEXV (last byte in the page)
000001F3 0200 178 = . - 13 ; allow room for string descriptor
          01F3 179 : type AAAAA_SSSX5 go here:
00000006 01F3 180 .LONG 6 ; string length (will cross psect boundary)
000001FB 01F7 181 .ADDRESS .+4 ; string address
          01FB 182 : type AAAAA_SSSX3 go here:
000001FC 01FB 183 .BLKB 1 ; low-order byte of string length
          01FC 184 : type AAAAA_SSSX2 go here:
00000200 01FC 185 .BLKL 1 ; string length
          0200 186 :
          0200 187 :
          0200 188 :
          0200 189 :
00000000 190 .PSECT SATS ACCVIO_2, RD, WRT, NOEXE, PAGE
00000200 0000 191 NOACCESS: .BLKB 512 ; reserve a page of space
00000000 0200 192 = . - 512 ; return loc ctr to beginning of psect
00000000 0000 193 .ADDRESS EMPTY ; address of accessible string
00000000 0004 194 .ADDRESS EMPTY/^X100 ; address of accessible string
          0008 195 : +
          0008 196 : *** NOTE -- DO NOT CHANGE LOCATION OR SEQUENCE OF ABOVE STATEMENTS!
          0008 197 : *** THIS PSECT (NOACCESS) MUST APPEAR IN MEMORY IMMEDIATELY
          0008 198 : *** FOLLOWING THE EMPTY PSECT. PSECT NAMES AND OPTIONS WILL BE
          0008 199 : *** CHOSEN TO FORCE THE DESIRED PSECT ORDERING.
          0008 200 : -
          0008 201 :
          0008 202 :
          0008 203 :
          0008 204 :
```



```

00000000 206      .PSECT SATSSF17, RD, WRT, EXE, LONG
0000      207      .SBTTL SATSSF17
0000      208      :++
0000      209      : FUNCTIONAL DESCRIPTION:
0000      210      :
0000      211      :     After performing some initial housekeeping, such as
0000      212      :     printing the module begin message and acquiring needed privileges,
0000      213      :     the system services are tested in each of their failure conditions.
0000      214      :     Detected failures are identified and an error message is printed
0000      215      :     on the terminal. Upon completion of the test a success or fail
0000      216      :     message is printed on the terminal.
0000      217      :
0000      218      : CALLING SEQUENCE:
0000      219      :
0000      220      :     $ RUN SATSSF17 ... (DCL COMMAND)
0000      221      :
0000      222      : INPUT PARAMETERS:
0000      223      :
0000      224      :     none
0000      225      :
0000      226      : IMPLICIT INPUTS:
0000      227      :
0000      228      :     none
0000      229      :
0000      230      : OUTPUT PARAMETERS:
0000      231      :
0000      232      :     none
0000      233      :
0000      234      : IMPLICIT OUTPUTS:
0000      235      :
0000      236      :     Messages to SYS$OUTPUT are the only output from SATSSF17.
0000      237      :     They are of the form:
0000      238      :
0000      239      :     %UETP-S-SATSMS, TEST MODULE SATSSF17 BEGUN ... (BEGIN MSG)
0000      240      :     %UETP-S-SATSMS, TEST MODULE SATSSF17 SUCCESSFUL ... (END MSG)
0000      241      :     %UETP-E-SATSMS, TEST MODULE SATSSF17 FAILED ... (END MSG)
0000      242      :     %UETP-I-TEXT, ... (VARIABLE INFORMATION ABOUT A TEST MODULE FAILURE)
0000      243      :
0000      244      : COMPLETION CODES:
0000      245      :
0000      246      :     The SATSSF17 routine terminates with a $EXIT to the
0000      247      :     operating system with a status code defined by UETP$_SATSMS.
0000      248      :
0000      249      : SIDE EFFECTS:
0000      250      :
0000      251      :     none
0000      252      :
0000      253      : --
0000      254      :
0000      255      :
0000      256      :
0000      257      : TEST_START SATSSF17                ; let the test begin

```



```

0000 0000
0004'CF 00 D4 0002
0000'CF 00 DD 0006
00000000'GF 02 DF 0008
00000000'GF 00 FB 000C
00009'CF 01 7F 001A
00000000'GF 01 FB 001E
0A24 30 0025
004C'CF 001F'CF DE 0028
0044'CF 03 00 01 FO 002F
00 00 DD 0036
0953'CF 01 FB 0038
003D
003D
003D
0056

```

STP0:

258
259
260

```

.ENTRY SATSSF17,0
CLRL W^CURRENT_TC
PUSHL #0
PUSHAL W^TPID
CALLS #2,G^SYSS$WAKE
CALLS #0,G^SYSS$HIBER
PUSHAQ W^TEST_MOD_NAME_D
CALLS #1,G^SYSS$SETPRN
BSBW W^MOD_MSG_PRINT
MOVAL W^TEST_MOD_SUCC,W^TMD_ADDR
INSV #SUCCESS,#0,#3,W^MOD_MSG_CODE
PUSHL #0
CALLS #1,W^REG_SAVE

```

```

$SETPRT_S INADR=W^INADR, RETADR=W^RETADR, -
PROT=W^PROT, PRVPRT=W^PRVPRT ; set noaccess psect
; ... for no user access

```



```
0056 262 .SBTTL INPUT TESTS
0056 263 :+
0056 264 :
0056 265 $INPUT tests
0056 266
0056 267 test for an EFN of -1
0056 268 :
0056 269 :-
018B'CF 0031'CF DE 0056 270 MOVAL W^INPUT,W^SERV_NAME ; set the service name
005D 271 $CREMBX,S LOGNAM=W^MBNAM,-
005D 272 CHAN=W^MBCHAN ; get a legal channel number
0074 273 $INPUT CHAN = W^MBCHAN,-
0074 274 BUFFER= W^MBNAM,-
0074 275 LENGTH= #0,-
0074 276 EFN = #-1 ; try EFN = -1
0097 277 FAIL_CHECK SSS$ILLEFC ; check failure
0097 277 PUSHL #SS$ILLEFC
009D 277 CALLS #1,W^REG_CHECK
00A2 278 :+
00A2 279 :
00A2 280 test for an EFN of 500
00A2 281 :
00A2 282 :-
00A2 283 NEXT_TEST
00A2 283
0004'CF 01 DO 00A2 STP1:
0053'CF 00 DD 00A7
0053'CF 01 FB 00A9
00AE 284 $INPUT CHAN = W^MBCHAN,-
00AE 285 BUFFER= W^MBNAM,-
00AE 286 LENGTH= #0,-
00AE 287 EFN= #500 ; try illegal EFN = 500
00D1 288 FAIL_CHECK SSS$ILLEFC ; check failure
00D1 288 PUSHL #SS$ILLEFC
00D7 288 CALLS #1,W^REG_CHECK
00DC 289 :+
00DC 290 :
00DC 291 test for an EFN of 123 without an associated cluster
00DC 292 :
00DC 293 :-
00DC 294 NEXT_TEST
00DC 294
0004'CF 02 DO 00DC STP2:
0053'CF 00 DD 00E1
0053'CF 01 FB 00E3
00E8 295 $INPUT CHAN = W^MBCHAN,-
00E8 296 BUFFER= W^MBNAM,-
00E8 297 LENGTH= #0,-
00E8 298 EFN = #123 ; try EFN =123
010B 299 FAIL_CHECK SSS$UNASEFC ; check failure
010B 299 PUSHL #SS$UNASEFC
0111 299 CALLS #1,W^REG_CHECK
0116 300 :+
0116 301 :
0116 302 test unaccessable IOSB parameter = page 0 access
```



```
0116 303 :-
0116 304 :-
0116 305 :-
0116
0116 STP3:
0004'CF 03 DO 0116 MOVL #3,W^CURRENT_TC
00 00 DD 0116 PUSHL #0
0953'CF 01 FB 011B CALLS #1,W^REG_SAVE
0122 306 $INPUT CHAN = W^MBCHAN,-
0122 307 IOSB = W^PRVHND_SXV40,-
0122 308 LENGTH= #0,-
0122 309 BUFFER= W^MBNAM ; try page 0 access
0143 310 FAIL_CHECK SSS_ACCVIO ; check failure
0143
095D'CF 0C DD 0143
01 01 FB 0145 PUSHL #SS$ ACCVIO
014A 311 :-
014A 312 :-
014A 313 :- test unaccessable IOSB parameter = read-only PSECT
014A 314 :-
014A 315 :-
014A 316
014A
014A NEXT_TEST
014A
0004'CF 04 DO 014A STP4:
00 00 DD 014A MOVL #4,W^CURRENT_TC
0953'CF 01 FB 0151 CALLS #1,W^REG_SAVE
0156 317 $INPUT CHAN = W^MBCHAN,-
0156 318 IOSB = W^PRVHND_SXV41,-
0156 319 LENGTH= #0,-
0156 320 BUFFER= W^MBNAM ; try read-only PSECT
0177 321 FAIL_CHECK SSS_ACCVIO ; check failure
0177
095D'CF 0C DD 0177
01 01 FB 0179 PUSHL #SS$ ACCVIO
017E 322 :-
017E 323 :-
017E 324 :- test unaccessable IOSB parameter = noaccess protection
017E 325 :-
017E 326 :-
017E 327
017E
017E NEXT_TEST
017E
0004'CF 05 DO 017E STP5:
00 00 DD 017E MOVL #5,W^CURRENT_TC
0953'CF 01 FB 0183 CALLS #1,W^REG_SAVE
018A 328 $INPUT CHAN = W^MBCHAN,-
018A 329 IOSB = W^PRVHND_SXV42,-
018A 330 LENGTH= #0,-
018A 331 BUFFER= W^MBNAM ; try noaccess BUFFER param.
01AB 332 FAIL_CHECK SSS_ACCVIO ; check failure
01AB
095D'CF 0C DD 01AB
01 01 FB 01AD PUSHL #SS$ ACCVIO
01B2 333 :-
01B2 334 :-
01B2 335 :- test non-existent channel number
01B2 336 :-
01B2 337 :-
01B2 338
01B2
01B2 NEXT_TEST
```



```

0004'CF 06 DO 01B2
0000 DD 01B2
0953'CF 01 FB 01B7
01BE 339
01CA 340
01CA 341
01CA 342
01E9 343
095D'CF 24 DD 01E9
01 FB 01EB
01F0 344
01F0 345
01F0 346
01F0 347
01F0 348
01F0 349
01F0
01F0
0004'CF 07 DO 01F0
0000 DD 01F5
0953'CF 01 FB 01F7
018F'CF D4 01FC 350
0200 351
0200 352
0200 353
021F 354
0000013C 8F DD 021F
095D'CF 01 FB 0225

STP6:
        MOVL #6,W^CURRENT_TC
        PUSHL #0
        CALLS #1,W^REG_SAVE
        $DASSGN_S CHAN = W^MBCHAN
        $INPUT CHAN = W^MBCHAN,-
        BUFFER= W^MBNAM,-
        LENGTH= #0
        FAIL_CHECK SSS_NOPRIV
        PUSHL #SS$ NOPRIV
        CALLS #1,W^REG_CHECK
; deassign the channel
; try illegal channel
; check the failure

: +
: test illegal channel number
: -
NEXT_TEST

STP7:
        MOVL #7,W^CURRENT_TC
        PUSHL #0
        CALLS #1,W^REG_SAVE
        CLRL W^MBCHAN
        $INPUT CHAN = W^MBCHAN,-
        BUFFER= W^MBNAM,-
        LENGTH= #0
        FAIL_CHECK SSS_IVCHAN
        PUSHL #SS$ IVCHAN
        CALLS #1,W^REG_CHECK
; make an illegal channel number
; try illegal channel number
; check failure

```



```
022A 356 .SBTTL OUTPUT TESTS
022A 357 :+
022A 358 :
022A 359 $OUTPUT tests
022A 360 :
022A 361 test for an EFN of -1
022A 362 :
022A 363 :-
022A 364 NEXT_TEST
022A
022A STP8:
0004'CF 08 DO 022A MOVL #8,W^CURRENT_TC
00 DD 022F PUSHL #0
0953'CF 01 FB 0231 CALLS #1,W^REG_SAVE
018B'CF 0037'CF DE 0236 365 MOVAL W^OUTPUT,W^SERV_NAME ; set the service name
023D 366 $CREMBX_S LOGNAM=W^MBNAM,- ; get a legal channel number
023D 367 CHAN=W^MBCHAN
0254 368 $OUTPUT CHAN = W^MBCHAN,-
0254 369 BUFFER = W^MBNAM,-
0254 370 LENGTH = #0,-
0254 371 EFN = #-1 ; try EFN = -1
0279 372 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 0279 PUSHL #SS$_ILLEFC
095D'CF 01 FB 027F CALLS #1,W^REG_CHECK
0284 373 :+
0284 374 :
0284 375 test for an EFN of 500
0284 376 :
0284 377 :-
0284 378 NEXT_TEST
0284
0284 STP9:
0004'CF 09 DO 0284 MOVL #9,W^CURRENT_TC
00 DD 0289 PUSHL #0
0953'CF 01 FB 028B CALLS #1,W^REG_SAVE
0290 379 $OUTPUT CHAN = W^MBCHAN,-
0290 380 BUFFER = W^MBNAM,-
0290 381 LENGTH = #0,-
0290 382 EFN = #500 ; try illegal EFN = 500
0285 383 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 0285 PUSHL #SS$_ILLEFC
095D'CF 01 FB 028B CALLS #1,W^REG_CHECK
02C0 384 :+
02C0 385 :
02C0 386 test for an EFN of 123 without an associated cluster
02C0 387 :
02C0 388 :-
02C0 389 NEXT_TEST
02C0
02C0 STP10:
0004'CF 0A DO 02C0 MOVL #10,W^CURRENT_TC
00 DD 02C5 PUSHL #0
0953'CF 01 FB 02C7 CALLS #1,W^REG_SAVE
02CC 390 $OUTPUT CHAN = W^MBCHAN,-
02CC 391 BUFFER = W^MBNAM,-
02CC 392 LENGTH = #0,-
02CC 393 EFN = #123 ; try EFN =123
```



```
00000234 8F DD 02F1 394 FAIL_CHECK SSS_UNASEFC ; check failure
095D'CF 01 FB 02F1 PUSHL #SS$ UNASEFC
02F7 CALLS #1,W*REG_CHECK
02FC 395 :+
02FC 396 : test unaccessable IOSB parameter = page 0 access
02FC 397 :
02FC 398 :
02FC 399 :-
02FC 400 NEXT_TEST
02FC STP11:
0004'CF 0B DO 02FC MOVL #11,W^CURRENT_TC
00 DD 0301 PUSHL #0
0953'CF 01 FB 0303 CALLS #1,W^REG_SAVE
0308 401 $OUTPUT CHAN = W^MBCHAN,-
0308 402 IOSB = W^PRVHND_SXV40,-
0308 403 LENGTH = #0,-
0308 404 BUFFER = W^MBNAM ; try page 0 access
032B 405 FAIL_CHECK SSS_ACCVIO ; check failure
095D'CF 0C DD 032B PUSHL #SS$ ACCVIO
01 FB 032D CALLS #1,W^REG_CHECK
0332 406 :+
0332 407 : test unaccessable IOSB parameter = read-only PSECT
0332 408 :
0332 409 :
0332 410 :-
0332 411 NEXT_TEST
0332 STP12:
0004'CF 0C DO 0332 MOVL #12,W^CURRENT_TC
00 DD 0337 PUSHL #0
0953'CF 01 FB 0339 CALLS #1,W^REG_SAVE
033E 412 $OUTPUT CHAN = W^MBCHAN,-
033E 413 IOSB = W^PRVHND_SXV41,-
033E 414 LENGTH = #0,-
033E 415 BUFFER = W^MBNAM ; try read-only PSECT
0361 416 FAIL_CHECK SSS_ACCVIO ; check failure
095D'CF 0C DD 0361 PUSHL #SS$ ACCVIO
01 FB 0363 CALLS #1,W^REG_CHECK
0368 417 :+
0368 418 : test unaccessable IOSB parameter = noaccess protection
0368 419 :
0368 420 :
0368 421 :-
0368 422 NEXT_TEST
0368 STP13:
0004'CF 0D DO 0368 MOVL #13,W^CURRENT_TC
00 DD 036D PUSHL #0
0953'CF 01 FB 036F CALLS #1,W^REG_SAVE
0374 423 $OUTPUT CHAN = W^MBCHAN,-
0374 424 IOSB = W^PRVHND_SXV42,-
0374 425 LENGTH = #0,-
0374 426 BUFFER = W^MBNAM ; try noaccess BUFFER param.
0397 427 FAIL_CHECK SSS_ACCVIO ; check failure
095D'CF 0C DD 0397 PUSHL #SS$ ACCVIO
01 FB 0399 CALLS #1,W^REG_CHECK
```



```
039E 428 :+
039E 429 :-
039E 430 : test non-existent channel number
039E 431 :-
039E 432 :-
039E 433 : NEXT_TEST
039E
039E STP14:
0004'CF 0E DO 039E MOVL #14,W^CURRENT_TC
00 DD 03A3 PUSHL #0
0953'CF 01 FB 03A5 CALLS #1,W^REG_SAVE
03AA 434 $DASSGN S CHAN = W^MBCHAN ; deassign the channel
03B6 435 $OUTPUT CHAN = W^MBCHAN,-
03B6 436 BUFFER = W^MBNAM,-
03B6 437 LENGTH = #0 ; try illegal channel
03D7 438 FAIL_CHECK SS$ NOPRIV ; check the failure
03D7 439
095D'CF 24 DD 03D7 PUSHL #SS$ NOPRIV
01 FB 03D9 CALLS #1,W^REG_CHECK
03DE 439 :+
03DE 440 :-
03DE 441 : test illegal channel number
03DE 442 :-
03DE 443 :-
03DE 444 : NEXT_TEST
03DE
03DE STP15:
0004'CF 0F DO 03DE MOVL #15,W^CURRENT_TC
00 DD 03E3 PUSHL #0
0953'CF 01 FB 03E5 CALLS #1,W^REG_SAVE
018F'CF D4 03EA 445 CLRL W^MBCHAN ; make an illegal channel number
03EE 446 $OUTPUT CHAN = W^MBCHAN,-
03EE 447 BUFFER = W^MBNAM,-
03EE 448 LENGTH = #0 ; try illegal channel number
040F 449 FAIL_CHECK SS$ IVCHAN ; check failure
040F
0000013C 8F DD 040F PUSHL #SS$ IVCHAN
095D'CF 01 FB 0415 CALLS #1,W^REG_CHECK
```



```
041A 451 .SBTTL QIO TESTS
041A 452 :+
041A 453 :
041A 454 : $QIO tests
041A 455 : test for an EFN of 0
041A 456 :
041A 457 :-
018B'CF 003E'CF DE 041A 458 MOVAL W^QIO,W^SERV NAME ; set service name
0421 459 $CREMBX_S LOGNAM=W^MBNAM,-
0421 460 CHAN=W^MBCHAN ; get a legal channel number
00B5'CF 018F'CF 3C 0438 461 MOVZWL W^MBCHAN,W^QIOP+QIOS_CHAN ; set the channel number
043F 462 $QIO_S CHAN=W^MBCHAN,-
043F 463 FUNC=#IOS READVBLK,-
043F 464 P1=W^MBNAM,-
043F 465 P2=#0,-
043F 466 EFN=#-1 ; try EFN=0
0462 467 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 0462 468 PUSHL #SSS_ILLEFC
095D'CF 01 FB 0468 468 CALLS #1,W^REG_CHECK
046D 468 $QIO_G W^QIOP ; try G
0476 469 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 0476 469 PUSHL #SSS_ILLEFC
095D'CF 01 FB 047C 469 CALLS #1,W^REG_CHECK
0481 470 :+
0481 471 :
0481 472 : test for an EFN of 500
0481 473 :
0481 474 :-
0481 475 NEXT_TEST
0481
0004'CF 10 DO 0481 STP16:
0953'CF 00 DD 0486
0953'CF 01 FB 0488
048D 476 $QIO_S CHAN=W^MBCHAN,-
048D 477 FUNC=#IOS READVBLK,-
048D 478 P1=W^MBNAM,-
048D 479 P2=#0,-
048D 480 EFN=#500 ; try EFN=500
04B0 481 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 04B0 481 PUSHL #SSS_ILLEFC
095D'CF 01 FB 04B6 481 CALLS #1,W^REG_CHECK
00B1'CF 000001F4 8F DO 04BB 482 MOVL #500,W^QIOP+QIOS_EFN ; set illegal EFN
04C4 483 $QIO_G W^QIOP ; try G
04CD 484 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 04CD 484 PUSHL #SSS_ILLEFC
095D'CF 01 FB 04D3 484 CALLS #1,W^REG_CHECK
04D8 485 :+
04D8 486 :
04D8 487 : test for an EFN of 123 without an associated cluster
04D8 488 :
04D8 489 :-
04D8 490 NEXT_TEST
04D8
0004'CF 11 DO 04D8 STP17:
00 DD 04DD 490 MOVL #17,W^CURRENT_TC
04DD 490 PUSHL #0
```



```
0953'CF 01 FB 04DF 491 CALLS #1,W^REG_SAVE
04E4 492 $QIO_S CHAN=W^MBCHAN,-
04E4 493 FUNC=#IOS$ READVBLK,-
04E4 494 P1=W^MBNAM,-
04E4 495 P2=#0,-
0507 496 EFN=#123 ; try S
; check failure
00000234 8F DD 0507 FAIL_CHECK SSS_UNASEFC
095D'CF 01 FB 050D PUSHL #SS$ UNASEFC
0000007B 8F DO 0512 497 CALLS #1,W^REG_CHECK
MOVL #123,W^QIOP+QIOS_EFN ; set illegal EFN
$QIO_G W^QIOP ; try G
051B 498 FAIL_CHECK SSS_UNASEFC ; check failure
0524 499 PUSHL #SS$ UNASEFC
00000234 8F DD 0524 CLRL W^QIOP+QIOS_EFN ; clean up illegal EFN
095D'CF 01 FB 052A
00B1'CF D4 052F 500
0533 501 ;+
0533 502 :- test unaccessable IOSB = page 0 access
0533 503
0533 504
0533 505 :-
0533 506 NEXT_TEST
0533
0004'CF 12 DO 0533 STP18:
00 DD 0538 MOVL #18,W^CURRENT_TC
0953'CF 01 FB 053A PUSHL #0
053F 507 CALLS #1,W^REG_SAVE
$QIO_S CHAN=W^MBCHAN,-
053F 508 FUNC=#IOS$ READVBLK,-
053F 509 P1=W^MBNAM,-
053F 510 P2=#0,-
053F 511 IOSB=W^PRVHND_SXV40 ; try S
0560 512 FAIL_CHECK SSS_ACCVIO ; check failure
0560 0C DD 0560 PUSHL #SS$ ACCVIO
095D'CF 01 FB 0562 CALLS #1,W^REG_CHECK
00BD'CF 0001'CF DE 0567 513 MOVAL W^PRVHND_SXV40,W^QIOP+QIOS IOSB ; set illegal address
056E 514 $QIO_G W^QIOP ; try G
0577 515 FAIL_CHECK SSS_ACCVIO ; check the failure
0577 0C DD 0577 PUSHL #SS$ ACCVIO
095D'CF 01 FB 0579 CALLS #1,W^REG_CHECK
057E 516 ;+
057E 517 :- test unaccessable IOSB = read-only PSECT
057E 518
057E 519
057E 520 :-
057E 521 NEXT_TEST
057E
0004'CF 13 DO 057E STP19:
00 DD 0583 MOVL #19,W^CURRENT_TC
0953'CF 01 FB 0585 PUSHL #0
058A 522 CALLS #1,W^REG_SAVE
$QIO_S CHAN=W^MBCHAN,-
058A 523 FUNC=#IOS$ READVBLK,-
058A 524 P1=W^MBNAM,-
058A 525 P2=#0,-
058A 526 IOSB=W^PRVHND_SXV41 ; try S
05AB 527 FAIL_CHECK SSS_ACCVIO ; check failure
05AB 0C DD 05AB PUSHL #SS$ ACCVIO
```



```
00BD'CF 0053'CF 01 FB 05AD 528 CALLS #1,W^REG_CHECK
00BD'CF 0053'CF DE 05B2 529 MOVAL W^PRVHND_SXV41,W^QIOP+QIOS_IOSB ; set IOSB adr
05B9 530 $QIO_G W^QIOP ; try G
05C2 530 FAIL_CHECK SSS_ACCVIO ; check failure
095D'CF 01 DD 05C2 531 :+
05C4 531 : test noaccess protection in IOSB
05C9 532 :-
05C9 533 :
05C9 534 :
05C9 535 :
05C9 536 :
05C9 536 NEXT_TEST
0004'CF 14 DO 05C9 STP20:
0004'CF 00 DD 05CE
0953'CF 01 FB 05D0 537 MOVL #20,W^CURRENT_TC
05D5 538 $QIO_S CHAN=W^MBCHAN,-
05D5 538 FUNC=#IOS_READVBLK,-
05D5 539 P1=W^MBNAM,-
05D5 540 P2=#0,-
05D5 541 IOSB=W^PRVHND_SXV42 ; try S
05F6 542 FAIL_CHECK SSS_ACCVIO ; check failure
095D'CF 01 DD 05F6
095D'CF 01 FB 05F8 543 :+
05FD 544 : test non-existent channel number
05FD 545 :-
05FD 546 :
05FD 547 :
05FD 548 :
05FD 548 NEXT_TEST
0004'CF 15 DO 05FD STP21:
0004'CF 00 DD 0602
0953'CF 01 FB 0604 549 MOVL #21,W^CURRENT_TC
0609 550 $DASSGN_S CHAN=W^MBCHAN ; release the channel
0615 550 $QIO_S CHAN=W^MBCHAN,-
0615 551 FUNC=#IOS_READVBLK,-
0615 552 P1=W^MBNAM,- ; try _S
0615 553 P2=#0
0634 554 FAIL_CHECK SSS_NOPRIV ; check failure
095D'CF 24 DD 0634
095D'CF 01 FB 0636 555 $QIO_G W^QIOP ; try G
0638 556 FAIL_CHECK SSS_NOPRIV ; check failure
0644 556
095D'CF 24 DD 0644
095D'CF 01 FB 0646 557 :+
0648 558 : test illegal channel number
0648 559 :-
0648 560 :
0648 561 :
0648 562 :
0648 562 NEXT_TEST
0004'CF 16 DO 0648 STP22:
0648 562 MOVL #22,W^CURRENT_TC
```


0953'CF	00	DD	0650		PUSHL #0	
	01	FB	0652		CALLS #1,W^REG_SAVE	
018F'CF		D4	0657	563	W^MBCHAN	; set illegal channel number
			0658	564	CHAN=W^MBCHAN,-	
			0658	565	FUNC=#IOS\$ READVBLK,-	
			0658	566	P1=W^MBNAM,-	
			0658	567	P2=#0	
			067A	568	FAIL_CHECK SSS_IVCHAN	; check failure
0000013C	8F	DD	067A		PUSHL #SS\$ IVCHAN	
095D'CF	01	FB	0680		CALLS #1,W^REG_CHECK	
00B5'CF		D4	0685	569	W^QIOP+QIOS_CHAN	; set illegal channel number
			0689	570	\$QIO_G W^QIOP	; try G
			0692	571	FAIL_CHECK SSS_IVCHAN	; check failure
0000013C	8F	DD	0692		PUSHL #SS\$ IVCHAN	
095D'CF	01	FB	0698		CALLS #1,W^REG_CHECK	


```
069D 573 .SBTTL QIOW TESTS
069D 574 :+
069D 575 :
069D 576 : $QIOW tests
069D 577 : test for an EFN of 0
069D 578 :
069D 579 :-
069D 580 NEXT_TEST
069D
069D STP23:
0004'CF 17 DO 069D MOVL #23,W^CURRENT_TC
0000 00 DD 06A2 PUSHL #0
0953'CF 01 FB 06A4 CALLS #1,W^REG_SAVE
018B'CF 0042'LF DE 06A9 581 MOVAL W^QIOW,W^SERV_NAME ; set service name
06B0 582 $CREMBX_S LOGNAM=W^MBNAM,-
06B0 583 CHAN=W^MBCHAN ; get a legal channel number
00E9'CF 018F'CF 3C 06C7 584 MOVZWL W^MBCHAN,W^QIOWP+QIOW$_CHAN ; set the channel number
06CE 585 $QIOW_S CHAN=W^MBCHAN,-
06CE 586 FUNC=#IOS$ READVBLK,-
06CE 587 P1=W^MBNAM,-
06CE 588 P2=#0,-
06CE 589 EFN=#-1 ; try EFN=0
06F1 590 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 06F1 PUSHL #SS$_ILLEFC
095D'CF 01 FB 06F7 CALLS #1,W^REG_CHECK
06FC 591 $QIOW G W^QIOWP ; try G
0705 592 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 0705 PUSHL #SS$_ILLEFC
095D'CF 01 FB 070B CALLS #1,W^REG_CHECK
0710 593 :+
0710 594 :
0710 595 : test for an EFN of 500
0710 596 :
0710 597 :-
0710 598 NEXT_TEST
0710
0710 STP24:
0004'CF 18 DO 0710 MOVL #24,W^CURRENT_TC
0000 00 DD 0715 PUSHL #0
0953'CF 01 FB 0717 CALLS #1,W^REG_SAVE
071C 599 $QIOW_S CHAN=W^MBCHAN,-
071C 600 FUNC=#IOS$ READVBLK,-
071C 601 P1=W^MBNAM,-
071C 602 P2=#0,-
071C 603 EFN=#500 ; try EFN=500
073F 604 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 073F PUSHL #SS$_ILLEFC
095D'CF 01 FB 0745 CALLS #1,W^REG_CHECK
00E5'CF 000001F4 8F DO 074A 605 MOVL #500,W^QIOWP+QIOW$_EFN ; set illegal EFN
0753 606 $QIOW G W^QIOWP ; try G
075C 607 FAIL_CHECK SSS_ILLEFC ; check failure
000000EC 8F DD 075C PUSHL #SS$_ILLEFC
095D'CF 01 FB 0762 CALLS #1,W^REG_CHECK
0767 608 :+
0767 609 :
0767 610 : test for an EFN of 123 without an associated cluster
0767 611 :
```



```
0767 612 :-  
0767 613 NEXT_TEST  
0767  
0767 STP25:  
0004'CF 19 DO 0767 MOVL #25,W^CURRENT_TC  
00 DD 076C PUSHL #0  
0953'CF 01 FB 076E CALLS #1,W^REG_SAVE  
0773 614 $QIOW_S CHAN=W^MBCHAN,-  
0773 615 FUNC=#IOS$ READVBLK,-  
0773 616 P1=W^MBNAM,-  
0773 617 P2=#0,-  
0773 618 EFN=#123 ; try S  
0796 619 FAIL_CHECK SSS_UNASEFC ; check failure  
0796  
0796 PUSHL #SS$ UNASEFC  
095D'CF 01 FB 079C CALLS #1,W^REG_CHECK  
00E5'CF 0000007B 8F DO 07A1 620 MOVL #123,W^QIOWP+QIOW$EFN ; set illegal EFN  
07AA 621 $QIOW_G W^QIOWP ; try G  
07B3 622 FAIL_CHECK SSS_UNASEFC ; check failure  
07B3  
07B3 PUSHL #SS$ UNASEFC  
095D'CF 01 FB 07B9 CALLS #1,W^REG_CHECK  
00E5'CF D4 07BE 623 CLRL W^QIOWP+QIOW$EFN ; clean up illegal EFN  
07C2 624 :+  
07C2 625 : test unaccessable IOSB = page 0 access  
07C2 626 :  
07C2 627 :  
07C2 628 :-  
07C2 629 NEXT_TEST  
07C2  
07C2 STP26:  
0004'CF 1A DO 07C2 MOVL #26,W^CURRENT_TC  
00 DD 07C7 PUSHL #0  
0953'CF 01 FB 07C9 CALLS #1,W^REG_SAVE  
07CE 630 $QIOW_S CHAN=W^MBCHAN,-  
07CE 631 FUNC=#IOS$ READVBLK,-  
07CE 632 P1=W^MBNAM,-  
07CE 633 P2=#0,-  
07CE 634 IOSB=W^PRVHND_SXV40 ; try S  
07EF 635 FAIL_CHECK SSS_ACCVIO ; check failure  
07EF  
07EF PUSHL #SS$ ACCVIO  
095D'CF 0C DD 07F1 CALLS #1,W^REG_CHECK  
00F1'CF 0001'CF DE 07F6 636 MOVAL W^PRVHND_SXV40,W^QIOWP+QIOW$IOSB ; set illegal address  
07FD 637 $QIOW_G W^QIOWP ; try G  
0806 638 FAIL_CHECK SSS_ACCVIO ; check the failure  
0806  
0806 PUSHL #SS$ ACCVIO  
095D'CF 0C DD 0808 CALLS #1,W^REG_CHECK  
01 FB 0808  
080D 639 :+  
080D 640 : test unaccessable IOSB = read-only PSECT  
080D 641 :  
080D 642 :  
080D 643 :-  
080D 644 NEXT_TEST  
080D  
080D STP27:  
0004'CF 1B DO 080D MOVL #27,W^CURRENT_TC  
00 DD 0812 PUSHL #0  
0953'CF 01 FB 0814 CALLS #1,W^REG_SAVE  
0819 645 $QIOW_S CHAN=W^MBCHAN,-
```



```
0819 646 FUNC=#IOS$ READVBLK,-
0819 647 P1=W^MBNAM,-
0819 648 P2=#0,-
0819 649 IOSB=W^PRVHND_SXV41 ; try S
083A 650 FAIL_CHECK SSS_ACCVIO ; check failure
OC DD 083A
01 FB 083C
00F1'CF 0053'CF DE 0841 651 MOVAL W^PRVHND_SXV41,W^QIOWP+QIOW$IOSB ; set IOSB adr
0848 652 $QIOW G W^QIOWP ; try G
0851 653 FAIL_CHECK SSS_ACCVIO ; check failure
OC DD 0851
01 FB 0853
095D'CF 0858 654 ;+
0858 655 ; test noaccess protection in IOSB
0858 656 ;
0858 657 ;
0858 658 ;
0858 659 :-
0858 659 NEXT_TEST
0858
0004'CF 1C DO 0858 STP28:
00 085D
01 FB 085F
0864 660 $QIOW_S CHAN=W^MBCHAN,-
0864 661 FUNC=#IOS$ READVBLK,-
0864 662 P1=W^MBNAM,-
0864 663 P2=#0,-
0864 664 IOSB=W^PRVHND_SXV42 ; try S
0885 665 FAIL_CHECK SSS_ACCVIO ; check failure
OC DD 0885
01 FB 0887
088C 666 ;+
088C 667 ; test non-existent channel number
088C 668 ;
088C 669 ;
088C 670 :-
088C 671 NEXT_TEST
088C
0004'CF 1D DO 088C STP29:
00 0891
01 FB 0893
0898 672 $DASSGN_S CHAN=W^MBCHAN ; release the channel
08A4 673 $QIOW_S CHAN=W^MBCHAN,-
08A4 674 FUNC=#IOS$ READVBLK,-
08A4 675 P1=W^MBNAM,-
08A4 676 P2=#0
08C3 677 FAIL_CHECK SSS_NOPRIV ; check failure
OC DD 08C3
01 FB 08C5
08CA 678 $QIOW G W^QIOWP ; try G
08D3 679 FAIL_CHECK SSS_NOPRIV ; check failure
OC DD 08D3
01 FB 08D5
08DA 680 ;+
08DA 681 ; test illegal channel number
08DA 682 ;
```



```
0953 697 .SBTTL REG_SAVE
0953 698 :++
0953 699 : FUNCTIONAL DESCRIPTION:
0953 700 : Subroutine to save R2-R11 in the register save location.
0953 701 :
0953 702 : CALLING SEQUENCE:
0953 703 :     PUSHL    #0           ; save a dummy parameter
0953 704 :     CALLS    #1,W^REG_SAVE ; save R2-R11
0953 705 :
0953 706 : INPUT PARAMETERS:
0953 707 :     NONE
0953 708 :
0953 709 : OUTPUT PARAMETERS:
0953 710 :     NONE
0953 711 :
0953 712 :--
0953 713 :
0953 714 REG_SAVE:
0953 715     .WORD     ^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
0008'CF 14 AD 28 OFFC 0955 716     MOVCL    #4*10,^X14(FP),W^REG_SAVE_AREA ; save the registers in the program
095C 717     RET
095D 718     .SBTTL  REG_CHECK
095D 719 :++
095D 720 : FUNCTIONAL DESCRIPTION:
095D 721 : Subroutine to test R0 & R2-R11 for proper content after a service
095D 722 : execution. A snapshot is taken by the REG_SAVE routine at the
095D 723 : beginning of each step and this routine is executed after the
095D 724 : services have been executed.
095D 725 :
095D 726 : CALLING SEQUENCE:
095D 727 :     PUSHL    #SS$,XXXXXX ; push expected R0 contents
095D 728 :     CALLS    #1,W^REG_CHECK ; execute this routine
095D 729 :
095D 730 : INPUT PARAMETERS:
095D 731 :     expected R0 contents on the stack
095D 732 :
095D 733 : OUTPUT PARAMETERS:
095D 734 :     possible error messages printed using $PUTMSG
095D 735 :
095D 736 :--
095D 737 :
095D 738 REG_CHECK:
095D 739     .WORD     ^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
095F 740     CMPL     4(AP),R0 ; is this the right fail code?
0963 741     BEQL     10$ ; br if yes
0965 742     PUSHL    R0 ; push received data
0967 743     PUSHL    4(AP) ; push expected data
096A 744     PUSHAL   W^EXP ; push the string variable
096E 745     CALLS    #3,W^PRINT_FAIL ; print the error message
0973 746 10$:
0973 747     CMPC3    #4*10,^X14(FP),W^REG_SAVE_AREA ; check all but R0
097A 748     BEQL     20$ ; br if O.K.
097C 749     SUBL3    #REG_SAVE_AREA,R3,R6 ; calculate the register number
0984 750     DIVL2    #4,R6
0987 751     ADDB3    #^X2,R6,W^REGNUM ; put it in the string
098D 752     BICL2    #3,R1 ; backup to register boundry
0990 753     BICL2    #3,R3
```

50 04 AC D1 095F 740
OE 13 0963 741
50 DD 0965 742
04 AC DD 0967 743
00E5'CF DF 096A 744
09A5'CF 03 FB 096E 745
0008'CF 14 AD 28 29 0973 746
56 53 00000008'8F C3 097A 748
56 04 C6 0984 750
0127'CF 56 02 81 0987 751
51 03 CA 098D 752
53 03 CA 0990 753


```
0127'CF DD 0993 754      PUSHL  W^REGNUM      ; push register number
61 DD 0997 755      PUSHL  (R1)              ; push received data
63 DD 0999 756      PUSHL  (R3)              ; push expected data
0115'CF DF 099B 757      PUSHAL W^REG          ; set string pntr param.
09A5'CF 04 FB 099F 758      CALLS  #4,W^PRINT_FAIL ; print the error message
04 09A4 759 20$:      RET
09A4 760      .SBTTL PRINT_FAIL
09A5 761      :++
09A5 762      : FUNCTIONAL DESCRIPTION:
09A5 763      : Subroutine to report failures using $PUTMSG
09A5 764      :
09A5 765      : CALLING SEQUENCE:
09A5 766      : Mode #1      PUSHL EXPECTED Mode #2      PUSHL REG_NUMBER
09A5 767      :           PUSHL RECEIVED      PUSHL EXPECTED
09A5 768      :           PUSHAL STRING_VAR     PUSHL RECEIVED
09A5 769      :           CALLS #3,W^PRINT_FAIL PUSHAL STRING_VAR
09A5 770      :           CALLS #4,W^PRINT_FAIL
09A5 771      :
09A5 772      : INPUT PARAMETERS:
09A5 773      : listed above
09A5 774      :
09A5 775      : OUTPUT PARAMETERS:
09A5 776      : an error message is printed using $PUTMSG
09A5 777      :
09A5 778      :--
09A5 779      :
09A5 780      :
003C 09A5 781 PRINT_FAIL:
09A5 782      .WORD  ^M<R2,R3,R4,R5>
09A7 783      $FAO_S  W^CS1,W^MESSAGEL,W^MSGL,#TEST_MOD_NAME,W^SERV_NAME,W^CURRENT_TC
09C8 784      PUTMSG  <#UETPS_TEXT,#1,#MESSAGEL> ; print the message
04 6C 91 09DD 785      CMPB  (AP),#4 ; is this a register message?
21 13 09E0 786      BEQL  10$ ; br if yes
25 11 09E2 787      $FAO_S  W^CS2,W^MESSAGEL,W^MSGL,4(AP),8(AP),4(AP),12(AP)
0A01 788      BRB  20$ ; goto output message
0A03 789 10$:      $FAO_S  W^CS3,W^MESSAGEL,W^MSGL,4(AP),16(AP),8(AP),4(AP),16(AP),12(AP)
0A03 790
0A28 791 20$:      PUTMSG  <#UETPS_TEXT,#1,#MESSAGEL> ; print the message
0A28 792      MOVAL  W^TEST_MOD_FAIL,W^TMD_ADDR ; set failure message address
004C'CF 002A'CF DE 0A3D 793      INSV  #ERROR,#0,#3,W^MOD_MSG_CODE ; set severity code
0044'CF 03 00 02 FO 0A44 794      RET
04 0A4B 795
```



```
0A4C 797 .SBTTL MOD_MSG_PRINT
0A4C 798 MOD_MSG_PRINT:
0A4C 799 :
0A4C 800 : *****
0A4C 801 : *
0A4C 802 : * PRINTS THE TEST MODULE BEGUN/SUCCESSFUL/FAILED MESSAGES *
0A4C 803 : * (USING THE PUTMSG MACRO). *
0A4C 804 : *
0A4C 805 : *****
0A4C 806 :
05 0A4C 807 PUTMSG <W^MOD_MSG_CODE,#2,W^TMN_ADDR,W^TMD_ADDR> ; PRINT MSG
0A61 808 RSB ; ... AND RETURN TO CALLER
0A62 809 :
0A62 810 .SBTTL CHMRTN
0A62 811 CHMRTN:
0A62 812 : *****
0A62 813 : *
0A62 814 : * CHANGE MODE ROUTINE. THIS ROUTINE GETS CONTROL WHENEVER *
0A62 815 : * A CMKRNL, CMEXEC, OR CMSUP SYSTEM SERVICE IS ISSUED *
0A62 816 : * BY THE MODE MACRO ('TO' OPTION). IT MERELY DOES *
0A62 817 : * A JUMP INDIRECT ON A FIELD SET UP BY MODE. IT HAS *
0A62 818 : * THE EFFECT OF RETURNING TO THE END OF THE MODE *
0A62 819 : * MACRO EXPANSION. *
0A62 820 : *
0A62 821 : *****
0A62 822 :
00000059'FF 0000 0A62 823 .WORD 0 ; ENTRY MASK
17 0A64 824 JMP @CHM_CONT ; RETURN TO MODE MACRO IN NEW MODE
0A6A 825 :
0A6A 826 : * RET INSTR WILL BE ISSUED IN EXPANSION OF 'MODE FROM, ....' MACRO
0A6A 827 :
0A6A 828 .END SATSSF17
```


SATSSF17
Symbol table

N 1
- SATS SYSTEM SERVICE TESTS (FAILING S. 16-SEP-1984 01:41:08 VAX/VMS Macro V04-00
5-SEP-1984 04:22:23 [UETP.SRC]SATSSF17.MAR;1

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```

$$ARGS      = 0000000C
$$T1        = 00000004
$$T2        = 00000009
BUF          00000133 R      03
CHMRTN       00000A62 R R    06
CHM_CONT     00000059 R R    03
CS1          00000053 R R    02
CS2          00000085 R R    02
CS3          00000CB2 R R    02
CURRENT_TC   00000004 R      03
EMPTY        00000000 R      04
ERROR        = 00000002
EXP          000000E5 R      02
INADR        00000047 R      02
INFO         = 00000003
INP          00000065 R      03
INPUT        00000031 R      02
IOS_READVBLK = 00000031
IOS_WRITEVBLK = 00000030
LIB$SIGNAL   ***** X    06
MBCHAN       0000018F R      03
MBNAM        000000F3 R R    02
MESSAGEL     00000183 R      03
MOD_MSG_CODE 00000044 R      03
MOD_MSG_PRINT 00000A4C R      06
MSGC         0000012B R      03
NOACCESS     00000000 R      05
OUT          00000088 R R    03
OUTPUT       00000037 R R    02
PRINT_FAIL   000009A5 R R    06
PRIVMASK     00000051 R      03
PROT         0000004F R      02
PRTSC_NA     ***** X    02
PRVHND_SXV40 = 00000001
PRVHND_SXV41 00000053 R      02
PRVHND_SXV42 = 000001FF R R    04
PRVPRT       00000050 R R    03
QIO          0000003E R      02
QIOS_ASTADR  = 00000014
QIOS_ASTPRM  = 00000018
QIOS_CHAN    = 00000008
QIOS_EFN     = 00000004
QIOS_FUNC    = 0000000C
QIOS_IOSB    = 00000010
QIOS_NARGS   = 0000000C
QIOS_P1      = 0000001C
QIOS_P2      = 00000020
QIOS_P3      = 00000024
QIOS_P4      = 00000028
QIOS_P5      = 0000002C
QIOS_P6      = 00000030
QIOP         000000AD R      03
QIOW         00000042 R      02
QIOWS_ASTADR = 00000014
QIOWS_ASTPRM = 00000018
QIOWS_CHAN   = 00000008
QIOWS_EFN    = 00000004

```

```

QIOWS_FUNC   = 0000000C
QIOWS_IOSB   = 00000010
QIOWS_NARGS   = 0000000C
QIOWS_P1      = 0000001C
QIOWS_P2      = 00000020
QIOWS_P3      = 00000024
QIOWS_P4      = 00000028
QIOWS_P5      = 0000002C
QIOWS_P6      = 00000030
QIOWP        000000E1 R      03
REG           00000115 R R    03
REGNUM        00000127 R R    03
REG_CHECK     0000095D R R    06
REG_SAVE      00000953 R R    06
REG_SAVE_AREA 00000008 R R    03
RETADR        0000005D R      03
SATSSF17      00000000 R G    06
SERV_NAME     0000018B R      03
SEVERE        = 00000004
SHR$K_SHRDEF  = 00000001
SHR$ TEXT     = 00001130
SS$_ACCVIO    = 0000000C
SS$_ILLEFC    = 000000EC
SS$_IVCHAN    = 0000013C
SS$_NOPRIV    = 00000024
SS$_UNASEFC   = 00000234
STEP          = 0000001E
STP0          0000003D R      06
STP1          000000A2 R R    06
STP10         000002C0 R R    06
STP11         000002FC R R    06
STP12         00000332 R R    06
STP13         00000368 R R    06
STP14         0000039E R R    06
STP15         000003DE R R    06
STP16         00000481 R R    06
STP17         000004D8 R R    06
STP18         00000533 R R    06
STP19         0000057E R R    06
STP2          000000DC R      06
STP20         000005C9 R R    06
STP21         000005FD R R    06
STP22         0000064B R R    06
STP23         0000069D R R    06
STP24         00000710 R R    06
STP25         00000767 R R    06
STP26         000007C2 R R    06
STP27         0000080D R R    06
STP28         00000858 R R    06
STP29         0000088C R R    06
STP3          00000116 R R    06
STP30         000008DA R R    06
STP4          0000014A R R    06
STP5          0000017E R R    06
STP6          000001B2 R R    06
STP7          000001F0 R R    06
STP8          0000022A R      06

```


SATSSF17
Symbol table

- SATS SYSTEM SERVICE TESTS (FAILING S. 16-SEP-1984 01:41:08 VAX/VMS Macro V04-00
5-SEP-1984 04:22:23 [UETP.SRC]SATSSF17.MAR;1

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```
STP9          00000284 R      06
STSV INHIB_MSG = 0000001C
SUCCESS       = 00000001
SYSCREMBX     ***** GX    06
SYSDASSGN     ***** GX    06
SYSEXIT       ***** GX    06
SY$FAO        ***** X     06
SYSHIBER      ***** GX    06
SY$QIO        ***** GX    06
SY$QIOW       ***** GX    03
SY$SETPRN     ***** GX    06
SY$SETPRT     ***** GX    06
SY$WAKE       ***** GX    06
TEST_MOD_BEGIN 00000019 R      02
TEST_MOD_FAIL  0000002A R      02
TEST_MOD_NAME  00000000 R      02
TEST_MOD_NAME_D 00000009 R      02
TEST_MOD_SUCC  0000001F R      02
TMD_ADDR      0000004C R      03
TMN_ADDR      00000048 R      03
TPID         00000000 R      03
UETP$ SATSMS   = 007480D9
UETP$ TEXT     = 00741133
WARNING       = 00000000
```

+-----+
! Psect synopsis !
+-----+

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
RODATA	000000FD (253.)	02 (2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC LONG
RWDATA	00000191 (401.)	03 (3.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC LONG
SATS_ACCVIO_1	00000200 (512.)	04 (4.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC PAGE
SATS_ACCVIO_2	00000200 (512.)	05 (5.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC PAGE
SATSSF17	00000A6A (2666.)	06 (6.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC LONG

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	37	00:00:00.08	00:00:00.54
Command processing	138	00:00:00.70	00:00:03.69
Pass 1	488	00:00:20.48	00:00:40.48
Symbol table sort	0	00:00:02.16	00:00:03.54
Pass 2	188	00:00:04.58	00:00:09.53
Symbol table output	17	00:00:00.15	00:00:00.17
Psect synopsis output	2	00:00:00.04	00:00:00.04
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	872	00:00:28.19	00:00:57.99

The working set limit was 1950 pages.
126282 bytes (247 pages) of virtual memory were used to buffer the intermediate code.

There were 80 pages of symbol table space allocated to hold 1387 non-local and 4 local symbols.
828 source lines were read in Pass 1, producing 34 object records in Pass 2.
52 pages of virtual memory were used to define 48 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name	Macros defined
-----	-----
\$255\$DUA28:[UETP.OBJ]UETP.MLB;1	10
\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	2
\$255\$DUA28:[SYSLIB]STARLET.MLB;2	33
TOTALS (all libraries)	45

1663 GETS were required to define 45 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:SATSSF17/OBJ=OBJ\$:SATSSF17 MSRC\$:SATSSF17/UPDATE=(ENH\$:SATSSF17)+EXECML\$/LIB+LIB\$:UETP/LIB

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